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EXAMINER	
KIM, DAVID S	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/517,671	CLARINGBURN, HARRY RICHARD
	Examiner	**Art Unit**
	DAVID S. KIM	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-28,31-39 and 42-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-28,31-39 and 42-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Barnard et al.

2. **Claims 24, 32, 35, 43, and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnard et al (U.S. Patent No. 6,115,157, hereinafter "Barnard") in view of Weik (*Fiber Optics Standard Dictionary, 3rd ed.*).

Regarding claim 24, Barnard discloses:

A method of controlling signal launch power of at least one optical signal in an optical communication network, comprising the step of:

pre-distorting the launch power (e.g., "transmitter powers are adjusted" in the abstract) of the at least one optical signal in accordance with a known value of a bandwidth of a modulation signal used to modulate the at least one optical signal (e.g., "in accordance with the channel rate" in the abstract), by passing the at least one pre-distorted optical signal through an optical amplifier (e.g., 10, 20, 30 in Figs. 3, 6, and 7), and by comparing a signal derived from an output of the optical amplifier (e.g., BER(2) in Fig. 3) with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal (e.g., $BER(2)_{Fail}$ in col. 7, l. 27-29).

Barnard does not expressly disclose:

performing the comparing step ***by using a comparator***.

However, Barnard does disclose the *function* of comparing "a signal derived from an output of the optical amplifier (e.g., BER(2) in Fig. 3) with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal (e.g., $BER(2)_{Fail}$ in col. 7, l. 27-29)".

Obviously, any suitable device that performs this *function* of comparing would constitute a ***comparator***. Moreover, a comparator is a well known device in the field of art, as shown by Weik (p. 145, "comparator"). Accordingly, using a ***comparator*** to perform the *function* of comparing in Barnard would provide an obvious variation.

Regarding claim 32, Barnard in view of Weik discloses:

The method as claimed in claim 24, wherein the optical communication network carries an n channel multiplex (multiplexer 13 in Figs. 3, 6, and 7).

Regarding claim 35, Barnard in view of Weik discloses:

An apparatus for controlling signal launch power of at least one optical signal in an optical communication network, comprising:

a) a launcher for launching the at least one optical signal onto the network (e.g., transmitters in Figs. 3, 6, and 7);

b) means for pre-distorting the launch power (e.g., "transmitter powers are adjusted" in the abstract) of the at least one optical signal in accordance with a known value of a bandwidth of a modulation signal used to modulate the at least one optical signal (e.g., "in accordance with the channel rate" in the abstract);

c) an optical amplifier through which at least one pre-distorted optical signal is passed in use (e.g., 10, 20, 30 in Figs. 3, 6, and 7); and

d) the pre-distorting means including a comparator (Weik, p. 145, "comparator") for comparing a signal derived from an output of the optical amplifier (Barnard, e.g., BER(2) in Fig. 3) with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal (Barnard, e.g., $BER(2)_{Fail}$ in col. 7, l. 27-29).

Regarding claim 43, claim 43 introduces limitations that correspond to the limitations introduced by claim 32. Therefore, the recited limitations in claim 32 read on the corresponding limitations in claims 43.

Regarding claim 46, Barnard in view of Weik discloses:

The apparatus as claimed in claim 35, wherein the apparatus is an add/drop node (e.g., ADM in Fig. 7).

Khaleghi et al.

3. **Claims 25-27, 31-34, 36-38, and 42-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Khaleghi et al. (U.S. Patent No. 6,040,933, hereinafter "Khaleghi") in view of Weik.

Regarding claim 25, Khaleghi discloses:

A method of controlling signal launch power of at least one optical signal in an optical communication network, comprising the step of:

pre-distorting the launch power (e.g., "amount of optical power adjustment of the channel transmitters" in the abstract; e.g., "amount (Z) of transmitter optical power adjustment" in col. 6, l. 33-39) of the at least one optical signal in accordance with a known value of a bandwidth of a modulation signal used to modulate the at least one optical signal (e.g., "signals having different bit rates" in the abstract; e.g., "amount (Z)" is determined in accordance with "bit rate"/bandwidth, shown in col. 6, l. 16-33), by passing the at least one pre-distorted optical signal through an optical amplifier (e.g., any of OA1-OA4 in Fig. 1).

Khaleghi does not expressly disclose:

performing the pre-distorting step by ***comparing*** a signal derived from an output of the optical amplifier with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal,

wherein the pre-distorting step is performed by pre-distorting the launch power of the at least one optical signal in accordance with a known value of expected noise on a signal path of the at least one optical signal.

However, Khaleghi does teach the ***processing*** of the same conceptual elements for the ***same claimed purpose*** of “controlling signal launch power of at least one optical signal in an optical communication network” (“adjusting the optical power of the channel transmitters” in the abstract):

(1) an output of the optical amplifier,

(2) the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal, and

(3) a known value of expected noise on a signal path of the at least one optical signal.

Note the more detailed explanation below:

Regarding (1), notice the processing of P^i_j in EQ. 2 in col. 5, l. 1-9, which is the ***optical power*** of the signal transmitted over the ith channel measured at the input of the jth amplifier, which would be suitably exemplified by the input of OA4, which would be from the “***output of the optical amplifier***” of OA3, as claimed.

Regarding (2), notice the processing of the ***bit rate*** of s1 in EQ. 3 in col. 6, l. 22-25, which constitutes “the known value of the ***bandwidth*** of the modulation signal used to modulate the at least one optical signal”, as claimed.

Regarding (3), notice the processing of F^i_j in EQ. 2 in col. 5, l. 1-9, which is the noise figure of the jth amplifier at channel i, which would be suitably exemplified by the ***noise figure*** of OA4, which constitutes “a known value of ***expected noise*** on a signal path of the at least one optical signal”, as claimed.

More exactly. Khaleghi specifically teaches the ***processing*** of these elements according to the following formula:

Z = X + Y, wherein Z is the amount of transmitter optical power adjustment (EQ. 4 in col. 6, l. 36-37)

$$X_i = 10\ \mathrm{LOG}_{10}\left(\frac{\sum_{j=1}^{M}\frac{1}{F_j^{ref}P_j^{ref}}}{\sum_{j=1}^{M}\frac{1}{F_j^{i}P_j^{i}}}\right)$$, see EQ. 2 in col. 5, l. 1-9.

$$Y = 10\ \mathrm{LOG}_{10}\left[\left(\frac{bitrateofs1}{bitrateofs2}\right)^{(1/2)}\right]$$, see EQ. 3 in col. 6, l. 22-25.

Simple substitution of X and Y in the formula Z = X + Y leads to the following form:

$$Z = 10\ \mathrm{LOG}_{10}\left(\frac{\sum_{j=1}^{M}\frac{1}{F_j^{ref}P_j^{ref}}}{\sum_{j=1}^{M}\frac{1}{F_j^{i}P_j^{i}}}\right) + 10\ \mathrm{LOG}_{10}\left[\left(\frac{bitrateofs1}{bitrateofs2}\right)^{(1/2)}\right]$$

The sum of logarithms of two numbers is the logarithm of the product of those two numbers, i.e., LOG q + LOG r = LOG (qr). Accordingly:

$$Z = 10\ \mathrm{LOG}_{10}\left(\left(\frac{\sum_{j=1}^{M}\frac{1}{F_j^{ref}P_j^{ref}}}{\sum_{j=1}^{M}\frac{1}{F_j^{i}P_j^{i}}}\right)\left[\left(\frac{bitrateofs1}{bitrateofs2}\right)^{(1/2)}\right]\right)$$

In this equation, Khaleghi ***processes*** elements (1), (2), and (3) for the ***same claimed purpose*** of "controlling signal launch power of at least one optical signal in an optical communication network" ("adjusting the optical power of the channel transmitters" in the abstract). (1) an output of the optical amplifier can be represented by, e.g., P^i_j. (2) the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal can be represented by, e.g., the bit rate of s1. (3) a known value of expected noise on a signal path of the at least one optical signal can be represented by, e.g., F^i_j. This subject matter of Khaleghi constitutes the basic fundamental teachings regarding elements (1), (2), and (3). Any practical implementation of this equation of Z into a corresponding apparatus would

constitute a suitable variation. Furthermore, the use of any common and known technique for such a practical implementation would constitute an *obvious* variation.

In the instant case, notice that the equation of Z has any number of equivalent mathematical forms. For example, another equivalent form for Z is the following:

$$Z = 10\ \mathrm{LOG}_{10}\left(\frac{\left[\left(\sum_{j=1}^{M}\frac{1}{F_j^{ref}P_j^{ref}}\right)(bitrateofs1)^{(1/2)}\right]}{\left[\left(\sum_{j=1}^{M}\frac{1}{F_j^{i}P_j^{i}}\right)(bitrateofs2)^{(1/2)}\right]}\right)$$

The logarithm of the division of a first number by a second number is the difference of the logarithm of the first number minus the logarithm of the second number, i.e., LOG (q/r) = LOG q - LOG r. Accordingly:

$$Z = 10\ \mathrm{LOG}_{10}\left(\left[\left(\sum_{j=1}^{M}\frac{1}{F_j^{ref}P_j^{ref}}\right)(bitrateofs1)^{(1/2)}\right]\right) - 10\ \mathrm{LOG}_{10}\left(\left[\left(\sum_{j=1}^{M}\frac{1}{F_j^{i}P_j^{i}}\right)(bitrateofs2)^{(1/2)}\right]\right)$$

This form of Z implies a ***comparing*** step. In a practical implementation of this form of Z in a corresponding apparatus, each term would be embodied by a corresponding signal for processing by any suitable element that would produce the ***difference*** between the two terms. As noted above, the use of any common and known technique for such a practical implementation of this form of Z would constitute an *obvious* variation. The use of a comparator qualifies as such a common and known technique for a practical implementation of determining a ***difference***, as shown by Weik ("difference" in definition 1 of "comparator" on p. 145). Accordingly, using a ***comparator*** to determine the ***difference*** of this form of Z would provide an obvious variation.

Regarding the claim limitation of "a signal derived from an ***output of the optical amplifier***", the term on the right suitably corresponds due to its incorporation of $\boldsymbol{P_j^i}$.

Regarding the claim limitation of "a reference signal dependent on the known value of the ***bandwidth*** of the modulation signal used to modulate the at least one optical signal", the term on the left suitably corresponds due to its incorporation of the ***bit rate*** of s1.

Regarding the claim limitation of "comparing" "a signal derived from an ***output of the optical amplifier***" with "a reference signal dependent on the known value of the ***bandwidth*** of the modulation signal used to modulate the at least one optical signal", notice that the difference form of Z implies the ***comparing*** step, embodied by the ***comparator*** of Weik.

Regarding the claim limitation of "pre-distorting…in accordance with a known value of ***expected noise*** on a signal path of the at least one optical signal", the term on the right suitably corresponds due to its incorporation of F^i_j.

Regarding claim 26, Khaleghi in view of Weik does not expressly disclose:

The method as claimed in claim 25, wherein the known values are provided by management systems of the optical communication network.

However, there must be some source for providing these "known values" of the prior art of record. Management systems are well known in the art for providing data for use in decision making, as exemplified by Weik (p. 567, "management information system" and "management system"). These "known values" constitutes data for use in decision making. Accordingly, management systems would provide an obvious source for providing these "known values".

Regarding claim 27, Khaleghi in view of Weik does not expressly disclose:

The method as claimed in claim 25, wherein the known values are provided by a network and connectivity information unit.

However, there must be some source for providing these "known values" of the prior art of record. Notice that these "known values" constitute network and connectivity information. For example, "a known value of a bandwidth of a modulation signal used to modulate the at least one optical signal" of the prior art of record ("bit rate"/bandwidth in col. 6, l. 16-33) constitutes information about the "bit rate"/bandwidth of an optical signal in the network, i.e., network information. For another example, "a known value of expected noise on a signal path of the at least one optical signal" of the prior art of record ("noise figure"

in col. 4, l. 36 – col. 5, l. 11) constitutes information about the “signal path”/connectivity in the network, i.e., connectivity information. Accordingly, any suitable source for these “known values” would constitute “a network and connectivity information unit”. Management systems are well known in the art for providing data for use in decision making, as exemplified by Weik (p. 567, “management information system” and “management system”). These “known values” constitutes data for use in decision making. Accordingly, management systems would provide an obvious source for providing these “known values”, thus constituting “a network and connectivity information unit”.

Regarding claim 31, Khaleghi in view of Weik discloses:

The method as claimed in claim 25, wherein the known value for expected noise on the signal path of the at least one optical signal is derived from a knowledge of a number and a type of the optical amplifier through which the at least one optical signal will pass (col. 2, l. 40-50).

Regarding claim 32, Khaleghi in view of Weik discloses:

wherein the optical communication network carries an n channel multiplex (multiplexer 22 in the figures), and wherein the pre-distorting step is performed by an optical amplifier (incorporation of influence of optical amplifiers in col. 5, l. 1-8).

Regarding claim 33, Khaleghi in view of Weik discloses:

wherein the launch power of the at least one optical signal with an associated modulation signal of a higher bandwidth is pre-distorted to increase a signal level of the at least one optical signal compared to an optical signal with an associated modulation signal of a lower bandwidth (col. 6, l. 6-16).

Regarding claim 34, Khaleghi in view of Weik does not expressly disclose:

The method as claimed in claim 25, wherein the launch power of the at least one optical signal is pre-distorted to increase a signal level of the at least one optical signal when the expected noise on the signal path of the at least one optical signal through the network is higher compared to an optical signal having a lower than expected noise on its signal path through the network.

However, notice that the prior art of record does incorporate expected noise (incorporation of influence of noise F in col. 5, l. 1-8) in an equation to determine how to control the signal level of an optical signal (amount of adjustment Xi in col. 5, l. 1-8). This equation is broad enough in scope to

encompass a variety of situations, including the situation where “the expected noise on the signal path of the at least one optical signal through the network (channel *i* in col. 5, l. 1-8) is higher compared to an optical signal having a lower than expected noise on its signal path through the network (channel *ref* in col. 5, l. 1-8)”. In such a situation, one possible result would be “to increase a signal level of the at least one optical signal”. Moreover, the prior art of record also more generally suggests the use of an increased signal level for an optical signal with higher noise (col. 6, l. 10-16).

Regarding claims 36-38 and 42-45, claims 36, 37, 38, 42, 43, 44, and 45 introduce limitations that correspond to the limitations introduced by claims 25, 26, 27, 31, 32, 33, and 34, respectively. Therefore, the recited limitations in claims 25-27 and 31-34 read on the corresponding limitations in claims 36-38 and 42-45.

Regarding claim 46, Khaleghi <u>in view of Weik</u> discloses:

wherein the apparatus is an add/drop node (e.g., ADM in Figs. 3 and 4).

4. **Claims 28 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Khaleghi <u>in view of Weik</u>, as applied to the claims above, and further in view of Ramaswami et al. (*Optical Networks: A Practical Perspective*, hereinafter “Ramaswami”).

Regarding claim 28, Khaleghi <u>in view of Weik</u> does not expressly disclose:

The method as claimed in claim 25, wherein the known values are supplied by a supervisory channel.

However, there must be some medium for supplying these “known values” of the prior art of record from the source of these “known values” of the prior art of record. The technique of a supervisory channel is well known in the art, as exemplified by Ramaswami (p. 425, middle paragraph, “supervisory channel”), for providing communications for management functions. Since these “known values” are used for management functions (e.g., management of functions of Khaleghi), the supplying of these “known values” would constitute providing communications for management functions. Accordingly, a supervisory channel would provide an obvious medium for providing communications for management functions, e.g., supplying these “known values” from the source of these “known values”.

Regarding claim 39, claim 39 introduces limitations that correspond to the limitations introduced by claim 28. These limitations introduced by claim 28 are addressed by Ramaswami. Similarly, Ramaswami is applied here to address the corresponding limitations in claim 39.

Response to Arguments

5. Applicant's arguments filed on 24 July 2008 have been fully considered but they are not persuasive. Applicant states:

> Claim 24 was amended by adding the limitations of claims 29 and 30 to claim 24, and claim 35 was amended by adding the limitations of claims 40 and 41 to claim 35.
>
> The Examiner argued that Barnard discloses a function of comparing a signal derived from an output of the optical amplifier (e.g., BER(2) in Fig. 3) with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal (e.g., BER(2)fail in col. 7, lines 27 - 29).
>
> It is clear, however, that claim 30 requires a reference signal dependent on the known value of the ***bandwidth*** of the modulation signal, whereas BER stands for "Bit Error Ratio" and is ***the ratio between the number of erroneous bits counted at a site of interest over the total number of bits received***, as clearly defined by Barnard (col 2, lines 57 - 59). Clearly, these are two different things. Bit error rate is a measure of a quality of a link, and ***not*** a measure of bandwidth.
>
> Therefore, even if a person skilled in the art would consider combining the teachings of Khaleghi and Barnard, the result of this combination would be different from the amended claims 24 and 35.
>
> (REMARKS, p. 6, emphasis Applicant's).

Examiner respectfully notes that the actual claim language does not require the comparison of ***bandwidth*** values. Rather, the actual claim language includes the comparison of two ***signals***: (1) a ***signal*** derived from an output of the optical amplifier and (2) a ***reference signal*** dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal. The standing rejection does address this comparison of the actual claim language. Notice the pertinent claim language from claims 24 and 35:

> comparing a ***signal derived*** from an output of the optical amplifier with a ***reference signal dependent*** on the known value of the ***bandwidth*** of the modulation signal used to modulate the at least one optical signal (emphasis Examiner's).

Notice the "output of the optical amplifier", e.g., 10, 20, 30 in Figs. 3, 6, and 7. From this "output", a signal is ***derived***, e.g., the signal corresponding to BER(2) in Fig. 3. Next, this signal corresponding to BER(2) is compared with a reference signal, the signal corresponding to BER(2)fail, as implied in col. 7, l. 27-29. This reference signal, BER(2)fail, actually is ***dependent*** on the known value of the ***bandwidth*** (Barnard,

the “chosen failure point [of BER(2)fail] ***depends*** on the ***bit rate***” in col. 7, l. 1-2; Applicant employs “***bandwidth***” synonymously with “***bit rate***” in Applicant’s specification filed on 09 December 2004, p. 4, l. 15, “the known ***bandwidth*** of each channel (its ***bit rate***)”) of the modulation signal (Barnard, e.g., D2 in Fig. 3) used to modulate the at least one optical signal (Barnard, e.g., D2 is used to modulate the optical signal output from T2 in Fig. 3). In view of these teachings of Barnard, Applicant’s arguments are not persuasive. Accordingly, Examiner respectfully maintains the standing rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID S. KIM whose telephone number is (571)272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S. K./
Examiner, Art Unit 2613

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613